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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	**John C. Pederson**
Application No.:	**10/640,858**
Filed:	**August 13, 2003**
For:	**LED Warning Signal Light and Movable Row of LED's**
Examiner:	**Jacob Y Choi**
Group Art Unit:	**2875**

MAIL STOP AMENDMENT
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Docket No.: E30.2-8146-US09

DECLARATION OF ROMAN MARJAMAA

PURSUANT TO 37 C.F.R. §132

My name is Roman Marjamaa and I am a professionally accredited electrical engineer having received a degree in electrical engineering from St. Cloud State University in May of 2001. I am currently employed as an electrical engineer with 911EP, Inc., and I am familiar with the invention disclosed in patent application Serial No. 10/640,858.

I have also reviewed the Suckow U.S. Patent No. 6,183,100 B1 and the Kouchi U.S. Patent No. 4,868,719.

I have also reviewed the Examiner's assertion that:

U.S. Patent No. 6,183,100 ("Suckow") discloses:

"a controller constructed and arranged to activate the light emitting diodes thereby producing at least two different types of visually distinct warning light signals simultaneously (column 7-8, lines 60-20)"; and

U.S. Patent No. 4,868,719 ("Kouchi") discloses in Figures 7 and 8:

"controller constructed and arranged to produce the at least two different types of visually distinct warning light signals in at least one combination."

"the controller constructed and arranged to activate the light emitting diode light sources producing at least two different types of visually distinct warning

light signals ("stop", "hazard", "help", "left", and "right" or matrix that is able to display many different patterns by CPU), the controller further constructed and arranged to produce the at least two different types of visually distinct warning light signals in at least one combination (FIGS. 7 and 8)."

Suckow '183 discloses in column 7, line 60 through column 8, line 20 that a regulator circuit supplies power to an oscillator circuit and a pair of one shot oscillators connected to an "or" gate to provide a single type of light signal, namely: "The result is two short duration flashes of light followed by a relatively long rest period followed by the two short duration flashes and so on." The repetition of two short flashes followed by a longer pause is **a single type** of light signal.

No disclosure is provided for the provision of at least two different types of visually distinct warning light signals being illuminated either simultaneously and/or in combination.

The Suckow '100 reference also states at column 8, lines 50-53: "attention getting, strobe-like, double flash separated by about 1.2 seconds of off time and then repeating as long as the power is applied."

Both of the statements from the specification of the '100 Suckow reference are consistent, and disclose one and only one "type" of light signal at any given time. The specification of the Suckow '100 reference is completely silent and fails to teach or disclose that a simultaneous or a combination light signal may be provided as formed of at least two different **"types"** of visually distinct warning light signals.

The Suckow '100 reference discloses an integrated circuit U1 which simultaneously controls **all** LEDs (Fig. 8A-8B). The circuitry of Figures 8A-8B of the Suckow '100 reference discloses the provision of one, and only one, **type** of light signal at any given time.

The specification for the Kouchi '719 reference in column 2 lines 7-14 teach: The desirable patterns may, for example, include **a pattern** (single pattern) in which a light-emitting region on the matrix display continuously varies in area depending on an amount of depression of a break pedal, **a sequential display pattern** (single pattern) in which, at winker display, a light-emitting region moves with the lapse of time

in the direction indicated, and **a pattern** (single pattern) formed by characters or symbols (either characters or symbols at any given time) in dependence upon circumstances.

The specification for the Kouchi '719 reference in addition states:

Column 3, lines 66-68 "The pattern generator 26 is adapted to output **a display pattern** signal in response to a command signal";

Column 4, lines 1-2 "**A signal** from the CPU 25 is outputted through an output port 27"; and

Column 4, lines 8-14 " the CPU 25 reads out **a display pattern** signal in accordance with the inputted signal, from the pattern generator 26, and outputs **the display pattern** signal to the drive circuit 19. On the basis of **the display pattern** signal from the CPU 25, the drive circuit 19 selectively turns on and off **the LEDs** 16 forming **the matrix display** 18".

The Kouchi '719 reference in column 4 lines 24-32 teaches that the depression of the break pedal causes the small central region of the display matrix to illuminate, where continued depression of the break pedal increases the area of illumination in the display. Applicant respectfully asserts that this disclosure teaches nothing more than **a single type** of light signal, namely a light signal which increases in luminosity. This is the teaching which is depicted in the timed snapshot drawings of Figures 5a and 5b. Figures 5a and 5b do not teach **multiple types** of light signals. Figures 5a and 5b teach a single type of light source (matrix) which is increasing in luminosity. Figures 5a and 5b do not teach **multiple types** of light signals simultaneously or **multiple types** of light signals in combination.

The Kouchi '719 reference also teaches column 4 lines 32-37 that the winker switch 23, is used to provide a so-called sequential display where illuminated light-emitting regions of the LED matrix move with the lapse of time in the right-hand direction. Applicant respectfully asserts that this disclosure teaches nothing more than **a single type** of light signal, namely a light signal which traverses across an LED matrix. This is the teaching which is depicted in the timed snapshot drawings of Figure 6. Figure

6 does not teach **multiple types** of light signals. Figure 6 teaches a single type of light signal which moves from left to right across an LED matrix. Figure 6 does not teach **multiple types** of light signals simultaneously or **multiple types** of light signals in combination.

The Kouchi '719 reference also teaches column 4 lines 44-51 and lines 59-62 that **a single word** such as "Stop", "Hazard", "Help", "Left", or "Right" may be displayed in the LED Matrix. The '719 specification teaches that the letters of the word may be illuminated. The specification of the '719 reference also teaches that the background of the matrix may be illuminated where the letters of the word are extinguished. Applicant respectfully asserts that this disclosure teaches nothing more than **a single type** of light signal at any given time, namely a word as displayed on an LED matrix. This is the teaching which is depicted in Figures 7 and 8. Figures 7 and 8 do not teach **multiple types** of light signals simultaneously or **multiple types** of light signals in combination. Figures 7 and 8 teach different ways in which a single type of light signal, namely a word, may be displayed on the LED matrix at a given time.

All of these statements from the specification of the '719 Kouchi reference are consistent, and disclose nothing more than a circuit to activate one and only one **"type"** of light signal at any given time. The specification of the Kouchi '719 reference is completely silent and fails to teach, suggest, or disclose that a simultaneous or a combination light signal may be provided as formed of at least two different **"types"** of visually distinct warning light signals.

In the second embodiment, a light signal is provided which is a sequential display, where illuminated light-emitting regions of the LED matrix move with the lapse of time across the LED matrix in the right-hand direction.

In the third embodiment, a light signal is provided which is a word illuminated on the matrix of LED's. In this embodiment the background for the word is not illuminated. (Figure 8 of '719)

In the fourth embodiment, a light signal is provided which is a word where the background of the matrix is illuminated and the word is not illuminated. (Figure 7 of '719)

Figure 4 of the Kouchi '71 patent does not disclose that a collection of less than all of LED's may be illuminated with **one type** of light signal, and the remaining LED's may be illuminated with a **different second type** of light signal; Figure 4 does not disclose that **first and second different types** of light signals may be either illuminated simultaneously and/or combination.

A review of Figure 5 and the specification of the Kouchi '719 patent does not show or teach that the Kouchi device may provide simultaneous illumination of at least **two different types** of light signals or that at least **two different types** of light signals may be illuminated in combination. Figure 5 is a time lapse figure which only shows that a single type of light signal increases in luminosity as a break pedal is depressed.

A review of Figure 6 and the specification of the Kouchi '719 patent does not show or teach that the Kouchi device may provide simultaneous illumination of at least **two different types** of light signals or that at least **two different types** of light signals may be illuminated in combination. Figure 6 is a time lapse figure which only shows that a single type of light signal namely a light signal which is sequentially moved across an LED matrix left to right.

A review of the remaining specification of the '719 patent is required to be made to attempt to identify the existence of any disclosure related to the topics of the simultaneous generation of at least two different types of light signals and/or the generation of at least two different types of light signals in combination. A review of the remainder of the Kouchi '719 patent specification reveals a failure of the Kouchi '719 patent to teach **simultaneous** illumination of at least **two different types** of light signals or the illumination of at least **two different types** of light signals **in combination**. The Kouchi '719 patent specification teaches one, and only one, type of light signal at any time, and where no simultaneous generation of two or more different types of light signals and no generation of two or more different types of light signals in combination is disclosed.

A person skilled in the art upon review of the Kouchi '719 patent would not have been able to use the disclosure to conceive, design, and create a controller which

would generate at least **two different types** of light signals either simultaneously and/or in combination. To provide a controller capable of regulating a composite lighting effect where **two or more different types of light** signals were either generated simultaneously and/or in combination, a person skilled in the art would have scratched the Kouchi '719 patent disclosure and would have initiated a complete redesign from ground zero.

The Kouchi '719 patent does not provide any assistance in the resolution of the problem to provide two or more different types of light signals simultaneously or in combination. An electrical redesign of the Kouchi '719 patent would be required to obtain this result.

A person skilled in the art attempting to design a controller capable of illuminating two **different types** of light signals simultaneously and/or in combination would have been required to look significantly beyond the Kouchi '719 patent disclosure to accomplish the desired result. Therefore it is my opinion that the invention described in the claims of the present application would not have been obvious to a person of ordinary skill in the art following a review of the Kouchi '719 reference. A person skilled in the art upon reading the Kouchi '719 reference would not have been able to make the invention as disclosed in the current application and as claimed herein.

I respectfully assert that the teaching of a composite light signal formed of two **different types** of light signals simultaneously, or two **different types** of light signals in combination, is not obvious and is not taught in the Kouchi '719 reference. In order to provide for a plurality of available light signals, for illumination of two or more different types of light signals simultaneously, or two or more different types of light signals in combination, a significant physical modification and electrical redesign of the Kouchi '719 reference would be required.

Each light emitting diode and/or group of light emitting diodes of the present application may be illuminated by the at least one controller with one of any desired number of "different types of light signals" at any given moment in time, where adjacent LED's or groups of LED's may be independently illuminated with different types of light signals, to provide a composite lighting effect. The composite lighting effect may include at least two different types of visually distinct warning light signals

simultaneously or may include at least two different types of visually distinct warning light signals in at least one combination.

In order to create at least one operational controller, problems such as, the selection and illumination of multiple segments or groups or individual LED's simultaneously and/or in combination; the problem of multiple connections between the LED's and the controller; the problem of independent operation of each segment and/or LED with respect to another segment or individual LED; the problem of thermo conductivity; and the selection of at least two different types of visually distinct warning light signals for generation within one or more segments independent of another segment were required to be resolved. None of these problems were present in the Kouchi '719 patent reference. The solutions to these problems are not trivial and require a complete electrical redesign of a Kouchi '719 device, and do not constitute a choice in design, especially when a completely different problem is to be solved.

If a flasher circuit was disclosed having a timer which was set to flash at ½ second intervals, i.e., ½ second on, ½ second off (repeat) and a change were made to physically modify the flasher circuit by substitution of resistors and capacitors to alter the flashing rate to ⅛ second intervals, i.e., ⅛ second on, ⅛ second off (repeat), and the Examiner were to assert that the difference in the circuits were a matter of choice of design, then I would agree. I do not agree that the addition of at least one controller which significantly changes the operational characteristics of a device related to the illumination of simultaneous and/or combinations of at least two different types of light signals constitutes a choice in design.

I have also reviewed the Suckow U.S. Patent No. 6,183, 100. This patent discloses the use of a single type of light signal formed of a flash-flash-pause, then repeat. The Suckow '100 patent does not address the problems I have identified above related to the generation of two different types of light signals either simultaneously and/or in combination. It is my opinion that the invention described in the present application would not have been obvious to a person skilled in the art following a review of the Kouchi '719 patent and the Suckow '100 patent either individually and/or in combination.

I further declare that all statements made herein of my knowledge are true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Respectfully submitted,

Date: 5 - 11, 2005

By: _____
Roman Marjamaa

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